

5509797.txt
SEQUENCE LISTING

<110> Gregorio Aversa
Frank Kolbinger
José M. Carballido Herrera
András Aszódi
José W. Saldanha
Bruce M. Hall

<120> Therapeutic binding molecules

<130> Not Yet Known

<160> 30

<170> PatentIn version 3.1

<210> 1

<211> 107

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> Part of the amino acid sequence of chimeric light chain

<400> 1

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
1 5 10 15

Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Asn Ile Gly Thr Ser
20 25 30

Ile Gln Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
35 40 45

Arg Ser Ser Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser
65 70 75 80

Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ser Asn Thr Trp Pro Phe
85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 2

<211> 118

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> Part of the amino acid sequence of chimeric heavy chain

<400> 2

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
20 25 30

Ile Ile His Trp Val Lys Gln Glu Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Phe Asn Pro Tyr Asn His Gly Thr Lys Tyr Asn Glu Lys Phe
50 55 60

Lys Gly Arg Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr
65 70 75 80

Met Asp Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Ile Tyr Tyr Cys
85 90 95

Ala Arg Ser Gly Pro Tyr Ala Trp Phe Asp Thr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser

115

<210> 3

<211> 214

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> Amino acid sequence of chimeric light chain

<400> 3

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Asn Ile Gly Thr Ser
 20 25 30

Ile Gln Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile
 35 40 45

Arg Ser Ser Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser
 65 70 75 80

Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ser Asn Thr Trp Pro Phe
 85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
 100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160

5509797.txt

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 4
<211> 448
<212> PRT
<213> Artificial

<220>
<221> MISC_FEATURE
<223> Amino acid sequence of chimeric heavy chain

<400> 4

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
20 25 30

Ile Ile His Trp Val Lys Gln Glu Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Phe Asn Pro Tyr Asn His Gly Thr Lys Tyr Asn Glu Lys Phe
50 55 60

Lys Gly Arg Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr
65 70 75 80

Met Asp Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Ile Tyr Tyr Cys
85 90 95

Ala Arg Ser Gly Pro Tyr Ala Trp Phe Asp Thr Trp Gly Gln Gly Thr
100 105 110

5509797.txt

Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr
210 215 220

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
245 250 255

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
260 265 270

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
275 280 285

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
290 295 300

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305 310 315 320

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
325 330 335

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
340 345 350

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
355 360 365

5509797.txt

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
370 375 380

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
385 390 395 400

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
405 410 415

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
420 425 430

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 5

<211> 321

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence encoding a polypeptide of SEQ ID NO:1

<400> 5

gacattctgc tgaccagtc tccagccatc ctgtctgtga gtccaggaga aagagtcagt	60
ttctcctgca gggccagtca gaacattggc acaagcatac agtggtatca acaaagaaca	120
aatggttctc caaggcttct cataaggtct tcttctgagt ctatctctgg gatcccttcc	180
aggttttagtg gcagtggatc agggacagat tttactctta gcatcaacag tgtggagtct	240
gaagatattg cagattatta ctgtcaacaa agtaatacct ggccattcac gttcggctcg	300
gggaccaagc ttgaaatcaa a	321

<210> 6

<211> 354

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence encoding a polypeptide of SEQ ID NO:2

```

<400> 6
gaggtgcagc tgcagcagtc aggacctgaa ctggtaaagc ctggggcttc agtgaagatg      60
tcctgcaagg cctctggata cacattcact aattatatta tccactgggt gaagcaggag      120
cctgggtcagg gccttgaatg gattggatat tttaatcctt acaatcatgg tactaagtac      180
aatgagaagt tcaaaggcag ggccacacta actgcagaca aatcctccaa cacagcctac      240
atggacctca gcagcctgac ctctgaggac tctgcatct actactgtgc aagatcagga      300
ccctatgcct ggtttgacac ctggggccaa gggaccacgg tcaccgtctc ctca          354

```

<210> 7

<211> 107

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> Part of amino acid sequence of humanised light chain designated h
umV2 (humV2 = VLm)

<400> 7

```

Asp Ile Leu Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1           5           10           15
Glu Arg Ala Thr Phe Ser Cys Arg Ala Ser Gln Asn Ile Gly Thr Ser
20           25           30
Ile Gln Trp Tyr Gln Gln Lys Thr Asn Gly Ala Pro Arg Leu Leu Ile
35           40           45
Arg Ser Ser Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
50           55           60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65           70           75           80

```

5509797.txt

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asn Thr Trp Pro Phe
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 8

<211> 107

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> Part of amino acid sequence of humanised light chain designated h
umV1 (humV1 = VLh)

<400> 8

Asp Ile Leu Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asn Ile Gly Thr Ser
20 25 30

Ile Gln Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Arg Ser Ser Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asn Thr Trp Pro Phe
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 9

<211> 118

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> Part of amino acid sequence of humanised heavy chain designated V
HE

<400> 9

Glu Val Gln Leu Val Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
20 25 30

Ile Ile His Trp Val Lys Gln Glu Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Phe Asn Pro Tyr Asn His Gly Thr Lys Tyr Asn Glu Lys Phe
50 55 60

Lys Gly Arg Ala Thr Leu Thr Ala Asn Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Gly Pro Tyr Ala Trp Phe Asp Thr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 10

<211> 118

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> Part of amino acid sequence of humanised heavy chain designated V
Page 9

HQ

<400> 10

Gln Val Gln Leu Val Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30

Ile Ile His Trp Val Lys Gln Glu Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Tyr Phe Asn Pro Tyr Asn His Gly Thr Lys Tyr Asn Glu Lys Phe
 50 55 60

Lys Gly Arg Ala Thr Leu Thr Ala Asn Lys Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Gly Pro Tyr Ala Trp Phe Asp Thr Trp Gly Gln Gly Thr
 100 105 110

Thr Val Thr Val Ser Ser
 115

<210> 11

<211> 354

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence encoding amino acid sequence SEQ ID NO:9

<400> 11

gaggtgcagc tggtggagtc aggagccgaa gtgaaaaagc ctggggccttc agtgaagggtg 60

tcctgcaagg cctctggata cacattcact aattatatta tccactgggt gaagcaggag 120

cctggtcagg gccttgaatg gattggatat tttaatcctt acaatcatgg tactaagtac 180

aatgagaagt tcaaaggcag ggccacacta actgcaaaca aatccatcag cacagcctac 240
 atggagctca gcagcctgcg ctctgaggac actgcggtct actactgtgc aagatcagga 300
 ccctatgcct ggtttgacac ctggggccaa gggaccacgg tcaccgtctc ctca 354

<210> 12

<211> 354

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence encoding amino acid sequence SEQ ID NO:10

<400> 12
 caggtgcagc tggtggagtc aggagccgaa gtgaaaaagc ctggggcttc agtgaagggtg 60
 tcctgcaagg cctctggata cacattcact aattatatta tccactgggt gaagcaggag 120
 cctggtcagg gccttgaatg gattggatat tttaatcctt acaatcatgg tactaagtac 180
 aatgagaagt tcaaaggcag ggccacacta actgcaaaca aatccatcag cacagcctac 240
 atggagctca gcagcctgcg ctctgaggac actgcggtct actactgtgc aagatcagga 300
 ccctatgcct ggtttgacac ctggggccaa gggaccacgg tcaccgtctc ctca 354

<210> 13

<211> 321

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence encoding amino acid sequence SEQ ID NO:7

<400> 13
 gacattctgc tgaccagtc tccagccacc ctgtctctga gtccaggaga aagagccact 60
 ttctcctgca gggccagtca gaacattggc acaagcatac agtggtatca acaaaaaaca 120
 aatggtgctc caaggcttct cataaggtct tcttctgagt ctatctctgg gatcccttcc 180

5509797.txt

aggtttagtg gcagtggatc agggacagat ttactctta ccatcagcag tctggagcct 240
gaagattttg cagtgtatta ctgtcaacaa agtaatacct ggccattcac gttcggccag 300
gggaccaagc tggagatcaa a 321

<210> 14

<211> 321

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence encoding amino acid sequence SEQ ID NO:8

<400> 14
gacattctgc tgaccagtc tccagccacc ctgtctctga gtccaggaga aagagccact 60
ctctcctgca gggccagtca gaacattggc acaagcatac agtgggtatca acaaaaacca 120
ggtcaggctc caaggcttct cataaggctt tcttctgagt ctatctctgg gatcccttcc 180
aggtttagtg gcagtggatc agggacagat ttactctta ccatcagcag tctggagcct 240
gaagattttg cagtgtatta ctgtcaacaa agtaatacct ggccattcac gttcggccag 300
gggaccaagc tggagatcaa a 321

<210> 15

<211> 8687

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence of the expression vector HCMV-G1 HuAb-VHQ
(Complete DNA Sequence of a humanised heavy chain expression vect
or comprising SEQ ID NO:12 (VHQ) from 3921-4274)

<400> 15
agctttttgc aaaagcctag gcctccaaaa aagcctcctc actacttctg gaatagctca 60

5509797.txt

gaggccgagg	cggcctcggc	ctctgcataa	ataaaaaaaaa	ttagtcagcc	atggggcgga	120
gaatgggcgg	aactgggcgg	agttaggggc	gggatgggcg	gagttagggg	cgggactatg	180
gttgctgact	aattgagatg	catgctttgc	atacttctgc	ctgctgggga	gcctggttgc	240
tgactaattg	agatgcatgc	tttgcatact	tctgcctgct	ggggagcctg	gggactttcc	300
acaccctaac	tgacacacat	tccacagctg	cctcgcgcgt	ttcgggtgatg	acggtgaaaa	360
cctctgacac	atgcagctcc	cggagacggg	cacagcttgt	ctgtaagcgg	atgccgggag	420
cagacaagcc	cgtcagggcg	cgtcagcggg	tgttggcggg	tgtcggggcg	cagccatgac	480
ccagtcacgt	agcgatagcg	gagtgtatac	tggcttaact	atgcggcatc	agagcagatt	540
gtactgagag	tgcaccatat	gcggtgtgaa	ataccgcaca	gatgcgtaag	gagaaaatac	600
cgcacagggc	gctcttccgc	ttcctcgtc	actgactcgc	tgcgctcggg	cgttcggctg	660
cggcgagcgg	tatcagctca	ctcaaaggcg	gtaatacggg	tatccacaga	atcaggggat	720
aacgcaggaa	agaacatgtg	agcaaaaggc	cagcaaaagg	ccaggaaccg	taaaaaggcc	780
gcgttgctgg	cgtttttcca	taggctccgc	ccccctgacg	agcatcacia	aaatcgacgc	840
tcaagtcaga	ggtggcgaaa	cccgacagga	ctataaagat	accaggcggt	tccccctgga	900
agctccctcg	tgcgctctcc	tgttccgacc	ctgccgctta	ccggatacct	gtccgccttt	960
ctcccttcgg	gaagcgtggc	gctttctcat	agctcacgct	gtaggtatct	cagttcgggtg	1020
taggtcgttc	gctccaagct	gggctgtgtg	cacgaacccc	ccgttcagcc	cgaccgctgc	1080
gccttatccg	gtaactatcg	tcttgagtcc	aacccggtaa	gacacgactt	atcgccactg	1140
gcagcagcca	ctggtaacag	gattagcaga	gcgaggtatg	taggcgggtg	tacagagttc	1200
ttgaagtggg	ggcctaacta	cggctacact	agaaggacag	tatttggtat	ctgcgctctg	1260
ctgaagccag	ttaccttcgg	aaaaagagtt	ggtagctctt	gatccggcaa	acaaaccacc	1320
gctggtagcg	gtggtttttt	tgtttgcaag	cagcagatta	cgcgcagaaa	aaaaggatct	1380
caagaagatc	ctttgatctt	ttctacgggg	tctgacgctc	agtggaacga	aaactcacgt	1440
taagggatth	tggtcatgag	attatcaaaa	aggatcttca	cctagatcct	tttaaattaa	1500
aaatgaagtt	ttaaatcaat	ctaaagtata	tatgagtaaa	cttgggtctga	cagttaccaa	1560
tgcttaatat	gtgaggcacc	tatctcagcg	atctgtctat	ttcgttcatc	catagttgcc	1620
tgactccccg	tcgtgtagat	aactacgata	cgggagggct	taccatctgg	ccccagtgct	1680
gcaatgatac	cgcgagaccc	acgctcaccg	gctccagatt	tatcagcaat	aaaccagcca	1740
gccggaaggg	ccgagcgcag	aagtgggtcct	gcaactttat	ccgcctccat	ccagtcctatt	1800
aattgttgcc	gggaagctag	agtaagtagt	tcgccagtta	atagtttgcg	caacgttggt	1860
gccattgctg	caggcatcgt	ggtgtcacgc	tcgtcgtttg	gtatggcttc	attcagctcc	1920
ggttcccaac	gatcaaggcg	agttacatga	tcccccatgt	tgtgcaaaaa	agcgggttagc	1980

5509797.txt

tccttcggtc	ctccgatcgt	tgtcagaagt	aagttggccg	cagtgttatc	actcatgggt	2040
atggcagcac	tgcataattc	tcttactgtc	atgccatccg	taagatgctt	ttctgtgact	2100
ggtgagtact	caaccaagtc	attctgagaa	tagtgtatgc	ggcgaccgag	ttgctcttgc	2160
ccggcgtcaa	cacgggataa	taccgcgcca	catagcagaa	ctttaaaggt	gctcatcatt	2220
ggaaaacgtt	cttcggggcg	aaaactctca	aggatcttac	cgctgttgag	atccagttcg	2280
atgtaacca	ctcgtgcacc	caactgatct	tcagcatctt	ttactttcac	cagcgtttct	2340
gggtgagcaa	aaacaggaag	gcaaaatgcc	gcaaaaaagg	gaataagggc	gacacggaaa	2400
tgttgaatac	tcatactctt	cctttttcaa	tattattgaa	gcatttatca	gggttattgt	2460
ctcatgagcg	gatacatatt	tgaatgtatt	tagaaaaata	aacaaatagg	ggttccgcgc	2520
acattttccc	gaaaagtgcc	acctgacgtc	taagaaacca	ttattatcat	gacattaacc	2580
tataaaaata	ggcgtatcac	gaggcccttt	cgtcttcaag	aattcagctt	ggctgcagtg	2640
aataataaaa	tgtgtgtttg	tccgaaatac	gcgttttgag	atttctgtcg	ccgactaaat	2700
tcatgtcgcg	cgatagtggg	gtttatcgcc	gatagagatg	gcgatattgg	aaaaatcgat	2760
atttgaaaat	atggcatatt	gaaaatgtcg	ccgatgtgag	tttctgtgta	actgatatcg	2820
ccatttttcc	aaaagtgatt	tttgggcata	cgcgatatct	ggcgatagcg	cttatatcgt	2880
ttacggggga	tggcgataga	cgactttggg	gacttggggc	attctgtgtg	tcgcaaatat	2940
cgcagtttcg	atataggtga	cagacgatat	gaggctatat	cgccgataga	ggcgacatca	3000
agctggcaca	tggccaatgc	atatcgatct	atacattgaa	tcaatattgg	ccattagcca	3060
tattattcat	tggttatata	gcataaatca	atattggcta	ttggccattg	catacgttgt	3120
atccatatca	taatatgtac	atttatattg	gctcatgtcc	aacattaccg	ccatgttgac	3180
attgattatt	gactagttat	taatagtaat	caattacggg	gtcattagtt	catagcccat	3240
atatggagtt	ccgcgttaca	taacttacgg	taaatggccc	gcctggctga	ccgcccacg	3300
acccccgccc	attgacgtca	ataatgacgt	atgttcccat	agtaacgcca	atagggactt	3360
tccattgacg	tcaatgggtg	gagtatttac	ggtaaactgc	ccacttggca	gtacatcaag	3420
tgtatcatat	gccaagtacg	ccccctattg	acgtcaatga	cggtaaatgg	cccgcctggc	3480
attatgcca	gtacatgacc	ttatgggact	ttcctacttg	gcagtacatc	tacgtattag	3540
tcatcgctat	taccatggtg	atgcgggtttt	ggcagtacat	caatgggcgt	ggatagcggg	3600
ttgactcacg	gggattttcca	agtctccacc	ccattgacgt	caatgggagt	ttgttttggc	3660
acaaaaatca	acgggacttt	ccaaaatgtc	gtaacaactc	cgccccattg	acgcaaattg	3720
gcggtaggcg	tgtacgggtg	gaggtctata	taagcagagc	tcgttttagtg	aaccgtcaga	3780
tcgcctggag	acgccatcca	cgctgttttg	acctccatag	aagacaccgg	gaccgatcca	3840

5509797.txt

gcctccgcaa	gcttgccgcc	accatggact	ggacctggag	ggtgttctgc	ctgctggccg	3900
tggcccccg	cgccacagc	caggtgcagc	tggtggagtc	aggagccgaa	gtgaaaaagc	3960
ctggggcttc	agtgaaggtg	tcctgcaagg	cctctggata	cacattcact	aattatatta	4020
tccactgggt	gaagcaggag	cctggtcagg	gccttgaatg	gattggatat	tttaatcctt	4080
acaatcatgg	tactaagtac	aatgagaagt	tcaaaggcag	ggccacacta	actgcaaaca	4140
aatccatcag	cacagcctac	atggagctca	gcagcctgcg	ctctgaggac	actgcggtct	4200
actactgtgc	aagatcagga	ccctatgcct	ggtttgacac	ctggggccaa	gggaccacgg	4260
tcaccgtctc	ctcaggtgag	ttctagaagg	atcccaagct	agctttctgg	ggcaggccag	4320
gcctgacctt	ggctttgggg	cagggagggg	gctaagggtga	ggcaggtggc	gccagccagg	4380
tgcacacca	atgcccata	gccagacac	tggacgctga	acctcgcgga	cagttaagaa	4440
cccagggggc	tctgcgccct	ggggccagct	ctgtcccaca	ccgcggtcac	atggcaccac	4500
ctctcttgca	gcctccacca	aggggccatc	ggtcttcccc	ctggcaccct	cctccaagag	4560
cacctctggg	ggcacagcgg	ccctgggctg	cctgggtcaag	gactacttcc	ccgaaccggt	4620
gacggtgtcg	tggaactcag	gcgccctgac	cagcggcgtg	cacaccttcc	cggctgtcct	4680
acagtcctca	ggactctact	ccctcagcag	cgtggtgacc	gtgccctcca	gcagcttggg	4740
caccagacc	tacatctgca	acgtgaatca	caagcccagc	aacaccaagg	tggacaagaa	4800
agttggtgag	aggccagcac	agggagggag	ggtgtctgct	ggaagccagg	ctcagcgctc	4860
ctgcctggac	gcatcccggc	tatgcagccc	cagtccaggg	cagcaaggca	ggccccgtct	4920
gcctcttcac	ccggaggcct	ctgcccggcc	cactcatgct	caggagagag	gtcttctggc	4980
tttttcccca	ggctctgggc	aggcacaggc	taggtgcccc	taaccaggc	cctgcacaca	5040
aaggggcagg	tgctgggctc	agacctgcca	agagccatat	ccgggaggac	cctgcccctg	5100
acctaagccc	accccaaagg	ccaaactctc	cactccctca	gctcggacac	cttctctcct	5160
cccagattcc	agtaactccc	aatcttctct	ctgcagagcc	caaactctgt	gacaaaactc	5220
acacatgccc	accgtgccc	ggtaagccag	cccaggcctc	gccctccagc	tcaaggcggg	5280
acaggtgccc	tagagtagcc	tgcattccag	gacaggcccc	agccgggtgc	tgacacgtcc	5340
acctccatct	cttcctcagc	acctgaactc	ctgggggggac	cgctcagtctt	cctcttcccc	5400
ccaaaacca	aggacaccct	catgatctcc	cggacccttg	aggtcacatg	cgtgggtggg	5460
gacgtgagcc	acgaagaccc	tgagggtcaag	ttcaactggg	acgtggacgg	cgtggagggtg	5520
cataatgcca	agacaaagcc	gcgggaggag	cagtacaaca	gcacgtaccg	tgtgggtcagc	5580
gtcctcaccg	tcctgcacca	ggactggctg	aatggcaagg	agtacaagtg	caaggctctcc	5640
aacaaagccc	tcccagcccc	catcgagaaa	accatctcca	aagccaaagg	tgggaccctg	5700
gggggtgcgag	ggccacatgg	acagaggccg	gctcggccca	ccctctgccc	tgagagtgac	5760

5509797.txt

cgctgtacca	acctctgtcc	ctacagggca	gccccgagaa	ccacaggtgt	acaccctgcc	5820
cccatcccgg	gatgagctga	ccaagaacca	ggtcagcctg	acctgcctgg	tcaaaggctt	5880
ctatcccagc	gacatcgccg	tggagtggga	gagcaatggg	cagccggaga	acaactacaa	5940
gaccacgcct	cccgtgctgg	actccgacgg	ctccttcttc	ctctacagca	agctcaccgt	6000
ggacaagagc	aggtggcagc	aggggaacgt	cttctcatgc	tccgtgatgc	atgaggctct	6060
gcacaaccac	tacacgcaga	agagcctctc	cctgtctccg	ggtaaattgag	tgcgacggcc	6120
ggcaagcccc	cgctccccgg	gctctcgcg	tcgcacgagg	atgcttggca	cgtaccccct	6180
gtacatactt	cccgggcgcc	cagcatggaa	ataaagcacc	cagcgctgcc	ctggggcccct	6240
gcgagactgt	gatggttctt	tccacgggtc	aggccgagtc	tgaggcctga	gtggcatgag	6300
atctgatatc	atcgatgaat	tcgagctcgg	taccggggga	tcgatccaga	catgataaga	6360
tacattgatg	agtttggaca	aaccacaact	agaatgcagt	gaaaaaaatg	ctttatttgt	6420
gaaatttgtg	atgctattgc	tttatttcta	accattataa	gctgcaataa	acaagttaac	6480
aacaacaatt	gcattcattt	tatgtttcag	gttcaggggg	aggtgtggga	ggttttttta	6540
agcaagtaaa	acctctacaa	atgtggtatg	gctgattatg	atctctagtc	aaggcactat	6600
acatcaaata	ttccttatta	acccctttac	aaattaaaaa	gctaaaggta	cacaattttt	6660
gagcatagtt	attaatagca	gacactctat	gcctgtgtgg	agtaagaaaa	aacagtatgt	6720
tatgattata	actgttatgc	ctacttataa	aggttacaga	atatttttcc	ataattttct	6780
tgtatagcag	tgcagctttt	tcctttgtgg	tgtaaatagc	aaagcaagca	agagttctat	6840
tactaaacac	agcatgactc	aaaaaactta	gcaattctga	aggaaagtcc	ttgggggtctt	6900
ctacctttct	cttctttttt	ggaggagtag	aatgttgaga	gtcagcagta	gcctcatcat	6960
cactagatgg	catttcttct	gagcaaaaca	ggttttcctc	attaaaggca	ttccaccact	7020
gctcccattc	atcagttcca	taggttggaa	tctaaaatac	acaaacaatt	agaatcagta	7080
gtttaacaca	ttatacactt	aaaaatttta	tattttacctt	agagctttta	atctctgtag	7140
gtagtttgtc	caattatgtc	acaccacaga	agtaagggtc	cttcacaaag	atccgggacc	7200
aaagcggcca	tcgtgcctcc	ccactcctgc	agttcggggg	catggatgcg	cggatagccg	7260
ctgctggttt	cctggatgcc	gacggatttg	cactgccggg	agaactccgc	gaggtcgtcc	7320
agcctcaggc	agcagctgaa	ccaactcgcg	aggggatcga	gcccgggggtg	ggcgaagaac	7380
tccagcatga	gatccccgcg	ctggaggatc	atccagccgg	cgtcccggaa	aacgattccg	7440
aagcccaacc	tttcatagaa	ggcggcggtg	gaatcgaaat	ctcgtgatgg	caggttgggc	7500
gtcgcttggg	cggtcatttc	gaaccccaga	gtcccgtctc	gaagaactcg	tcaagaaggc	7560
gatagaaggc	gatgcgctgc	gaatcgggag	cggcgatacc	gtaaagcacg	aggaagcggt	7620

5509797.txt

```

cagcccatc gccgccaagc tcttcagcaa tatcacgggt agccaacgct atgtcctgat 7680
agcgggtccgc cacaccagc cggccacagt cgatgaatcc agaaaagcgg ccattttcca 7740
ccatgatatt cggcaagcag gcatcgccat gggtcacgac gagatcctcg ccgtcgggca 7800
tgcgcgcctt gagcctggcg aacagttcgg ctggcgcgag cccctgatgc tcttcgtcca 7860
gatcatcctg atcgacaaga ccggcttcca tccgagtacg tgctcgctcg atgcgatgtt 7920
tcgcttggtg gtcgaatggg caggtagccg gatcaagcgt atgcagccgc cgcattgcat 7980
cagccatgat ggatactttc tcggcaggag caagggtgaga tgacaggaga tcctgccccg 8040
gcacttcgcc caatagcagc cagtcccttc ccgcttcagt gacaacgtcg agcacagctg 8100
cgcaaggaac gcccgtcgtg gccagccacg atagccgcgc tgcctcgtcc tgcagttcat 8160
tcagggcacc ggacaggctg gtcttgacaa aaagaaccgg gcgcccctgc gctgacagcc 8220
ggaacacggc ggcatcagag cagccgattg tctgttgtgc ccagtcatag ccgaatagcc 8280
tctccacca agcggccgga gaacctgcgt gcaatccatc ttgttcaatc atgcgaaacg 8340
atcctcatcc tgtctcttga tcagatcttg atcccctgcg ccatcagatc cttggcggca 8400
agaaagccat ccagtttact ttgcagggtt tcccaacctt accagagggc gccccagctg 8460
gcaattccgg ttcgcttgct gtccataaaa ccgcccagtc tagctatcgc catgtaagcc 8520
cactgcaagc tacctgcttt ctctttgcgc ttgcgttttc cttgttcag atagcccagt 8580
agctgacatt catccggggg cagcacggtt tctgcggact ggctttctac gtgttccgct 8640
tccttttagca gcccttgccg cctgagtgtg tgcggcagcg tgaagct 8687

```

<210> 16

<211> 8687

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence of the expression vector HCMV-G1 HuAb-VHE
(Complete DNA Sequence of a humanised heavy chain expression vect
or comprising SEQ ID NO: 11 (VHE) from 3921-4274)

<400> 16

```

agctttttgc aaaagcctag gcctccaaaa aagcctcctc actacttctg gaatagctca 60
gaggccgagg cggcctcggc ctctgcataa ataaaaaaaa ttagtcagcc atggggcgga 120
gaatgggcgg aactgggcgg agttaggggc gggatgggcg gagttagggg cgggactatg 180

```

5509797.txt

gttgctgact	aattgagatg	catgctttgc	atacttctgc	ctgctgggga	gcctgggtgc	240
tgactaattg	agatgcatgc	tttgcatact	tctgcctgct	ggggagcctg	gggactttcc	300
acaccctaac	tgacacacat	tccacagctg	cctcgcgcgt	ttcgggtgatg	acggtgaaaa	360
cctctgacac	atgcagctcc	cggagacggg	cacagcttgt	ctgtaagcgg	atgccgggag	420
cagacaagcc	cgtcagggcg	cgtcagcggg	tgttggcggg	tgtcggggcg	cagccatgac	480
ccagtcacgt	agcgatagcg	gagtgtatac	tggcttaact	atgcggcatc	agagcagatt	540
gtactgagag	tgcaccatat	gcggtgtgaa	ataccgcaca	gatgcgtaag	gagaaaatac	600
cgcatacaggc	gctcttccgc	ttcctcgctc	actgactcgc	tgcgctcggg	cgttcggctg	660
cggcgagcgg	tatcagctca	ctcaaaggcg	gtaatacggg	tatccacaga	atcaggggat	720
aacgcaggaa	agaacatgtg	agcaaaaggc	cagcaaaagg	ccaggaaccg	taaaaaggcc	780
gcgttgctgg	cgtttttcca	taggctccgc	ccccctgacg	agcatcacao	aaatcgacgc	840
tcaagtcaga	ggtagcgaaa	cccagacagga	ctataaagat	accaggcggt	tccccctgga	900
agctccctcg	tgcgctctcc	tggtccgacc	ctgccgctta	ccggatacct	gtccgccttt	960
ctcccttcgg	gaagcgtggc	gctttctcat	agctcacgct	gtaggtatct	cagttcgggtg	1020
taggtcgttc	gctccaagct	gggctgtgtg	cacgaacccc	ccgttcagcc	cgaccgctgc	1080
gccttatccg	gtaactatcg	tcttgagtcc	aacccggtaa	gacacgactt	atcgccactg	1140
gcagcagcca	ctggtaacag	gattagcaga	gcgaggtatg	taggcgggtg	tacagagttc	1200
ttgaagtggg	ggcctaacta	cggctacact	agaaggacag	tatttggtat	ctgcgctctg	1260
ctgaagccag	ttaccttcgg	aaaaagagtt	ggtagctctt	gatccggcaa	acaaaccacc	1320
gctggtagcg	gtgggtttttt	tgtttgcaag	cagcagatta	cgcgagaaaa	aaaaggatct	1380
caagaagatc	ctttgatctt	ttctacgggg	tctgacgctc	agtggaacga	aaactcacgt	1440
taagggattt	tggtcatgag	attatcaaaa	aggatcttca	cctagatcct	tttaaattaa	1500
aatgaagtt	ttaaataaat	ctaaagtata	tatgagtaaa	cttgggtctga	cagttaccaa	1560
tgcttaatca	gtgaggcacc	tatctcagcg	atctgtctat	ttcgttcatc	catagttgcc	1620
tgactccccg	tcgtgtagat	aactacgata	cgggaggggt	taccatctgg	ccccagtgct	1680
gcaatgatac	cgcgagaccc	acgctcaccg	gctccagatt	tatcagcaat	aaaccagcca	1740
gccggaaggg	ccgagcgcag	aagtgggtcct	gcaactttat	ccgcctccat	ccagtctatt	1800
aattgttgcc	gggaagctag	agtaagtagt	tcgccagtta	atagtttgcg	caacgttggt	1860
gccattgctg	caggcatcgt	ggtgtcacgc	tcgtcgtttg	gtatggcttc	attcagctcc	1920
ggttcccaac	gatcaaggcg	agttacatga	tcccccatgt	tgtgcaaaaa	agcggttagc	1980
tccttcgggtc	ctccgatcgt	tgtcagaagt	aagttggccg	cagtgttatc	actcatgggt	2040

5509797.txt

atggcagcac	tgcataattc	tcttactgtc	atgccatccg	taagatgctt	ttctgtgact	2100
ggtgagtact	caaccaagtc	attctgagaa	tagtgtatgc	ggcgaccgag	ttgctcttgc	2160
ccggcgtcaa	cacgggataa	taccgcgcca	catagcagaa	ctttaaaagt	gctcatcatt	2220
ggaaaacggt	cttcggggcg	aaaactctca	aggatcttac	cgctgttgag	atccagttcg	2280
atgtaaccca	ctcgtgcacc	caactgatct	tcagcatctt	ttactttcac	cagcgtttct	2340
gggtgagcaa	aaacaggaag	gcaaaatgcc	gcaaaaaagg	gaataagggc	gacacggaaa	2400
tgttgaatac	tcatactctt	cctttttcaa	tattattgaa	gcatttatca	gggttattgt	2460
ctcatgagcg	gatacatatt	tgaatgtatt	tagaaaaata	aacaaatagg	ggttccgcgc	2520
acatttcccc	gaaaagtgcc	acctgacgtc	taagaaacca	ttattatcat	gacattaacc	2580
tataaaaata	ggcgtatcac	gaggcccttt	cgtcttcaag	aattcagctt	ggctgcagtg	2640
aataataaaa	tgtgtgtttg	tccgaaatac	gcgttttgag	atttctgtcg	ccgactaaat	2700
tcatgtcgcg	cgatagtggg	gtttatcgcc	gatagagatg	gcgatattgg	aaaaatcgat	2760
atttgaaaat	atggcatatt	gaaaatgtcg	ccgatgtgag	tttctgtgta	actgatatcg	2820
ccatttttcc	aaaagtgatt	tttgggcata	cgcgatatct	ggcgatagcg	cttatatcgt	2880
ttacggggga	tggcgataga	cgactttggg	gacttgggcg	attctgtgtg	tcgcaaatat	2940
cgcagtttcg	atataggtga	cagacgatat	gaggctatat	cgccgataga	ggcgacatca	3000
agctggcaca	tggccaatgc	atatcgatct	atacattgaa	tcaatattgg	ccattagcca	3060
tattattcat	tggttatata	gcataaatca	atattggcta	ttggccattg	catacgttgt	3120
atccatatca	taatatgtac	atttatattg	gctcatgtcc	aacattaccg	ccatgttgac	3180
attgattatt	gactagttat	taatagtaat	caattacggg	gtcattagtt	catagcccat	3240
atatggagtt	ccgcgttaca	taacttacgg	taaatggccc	gcctggctga	ccgcccacg	3300
acccccgccc	attgacgtca	ataatgacgt	atgttcccat	agtaacgcca	atagggactt	3360
tccattgacg	tcaatgggtg	gagtatttac	ggtaaactgc	ccacttggca	gtacatcaag	3420
tgtatcatat	gccaagtacg	ccccctattg	acgtcaatga	cggtaaattg	ccgcctggc	3480
attatgcca	gtacatgacc	ttatgggact	ttcctacttg	gcagtacatc	tacgtattag	3540
tcatcgctat	taccatgggtg	atgcggtttt	ggcagtacat	caatgggcgt	ggatagcggt	3600
ttgactcacg	gggatttcca	agtctccacc	ccattgacgt	caatgggagt	ttgttttggc	3660
acaaaaatca	acgggacttt	ccaaaatgtc	gtaacaactc	cgccccattg	acgcaaatgg	3720
gcggtaggcg	tgtacgggtg	gaggtctata	taagcagagc	tcgttttagtg	aaccgtcaga	3780
tcgcctggag	acgcatcca	cgctgttttg	acctccatag	aagacaccgg	gaccgatcca	3840
gcctccgcaa	gcttgccgcc	accatggact	ggacctggag	ggtgttctgc	ctgctggccg	3900
tggcccccg	cgcccacagc	gaggtgcagc	tgggtggagtc	aggagccgaa	gtgaaaaagc	3960

5509797.txt

ctggggcttc	agtgaaggtg	tcctgcaagg	cctctggata	cacattcact	aattatatta	4020
tccactgggt	gaagcaggag	cctggtcagg	gccttgaatg	gattggatat	tttaatcctt	4080
acaatcatgg	tactaagtac	aatgagaagt	tcaaaggcag	ggccacacta	actgcaaaca	4140
aatccatcag	cacagcctac	atggagctca	gcagcctgcg	ctctgaggac	actgcggtct	4200
actactgtgc	aagatcagga	ccctatgcct	ggtttgacac	ctggggccaa	gggaccacgg	4260
tcaccgtctc	ctcaggtgag	ttctagaagg	atcccaagct	agctttcttg	ggcaggccag	4320
gcctgacctt	ggctttgggg	cagggagggg	gctaaggtga	ggcaggtggc	gccagccagg	4380
tgcacacca	atgcccata	gcccagacac	tggacgctga	acctcgcgga	cagttaagaa	4440
cccagggggc	tctgcgccct	gggcccagct	ctgtcccaca	ccgcggtcac	atggcaccac	4500
ctctcttgca	gcctccacca	agggcccatc	ggtcttcccc	ctggcaccct	cctccaagag	4560
cacctctggg	ggcacagcgg	ccctgggctg	cctgggtcaag	gactacttcc	ccgaaccggt	4620
gacggtgtcg	tggaactcag	gcgcccctgac	cagcggcgtg	cacaccttcc	cggctgtcct	4680
acagtcctca	ggactctact	ccctcagcag	cgtgggtgacc	gtgccctcca	gcagcttggg	4740
caccagacc	tacatctgca	acgtgaatca	caagcccagc	aacaccaagg	tggacaagaa	4800
agttggtgag	aggccagcac	agggagggag	ggtgtctgct	ggaagccagg	ctcagcgctc	4860
ctgcctggac	gcatcccggc	tatgcagccc	cagtccaggg	cagcaaggca	ggccccgtct	4920
gcctcttcac	ccggaggcct	ctgcccggcc	cactcatgct	cagggagagg	gtcttctggc	4980
tttttcccca	ggctctgggc	aggcacaggc	taggtgcccc	taaccagggc	cctgcacaca	5040
aaggggcagg	tgctgggctc	agacctgcca	agagccatat	ccgggaggac	cctgcccctg	5100
acctaagccc	accccaaagg	ccaaactctc	cactccctca	gctcggacac	cttctctcct	5160
cccagattcc	agtaactccc	aatcttctct	ctgcagagcc	caaatcttgt	gacaaaactc	5220
acacatgccc	accgtgccc	ggtaagccag	cccaggcctc	gccctccagc	tcaaggcggg	5280
acaggtgccc	tagagtagcc	tgcattcagg	gacaggcccc	agccgggtgc	tgacacgtcc	5340
acctccatct	cttctcagc	acctgaactc	ctggggggac	cgtcagtctt	cctcttcccc	5400
ccaaaaccca	aggacaccct	catgatctcc	cggacccttg	aggtcacatg	cgtgggtggtg	5460
gacgtgagcc	acgaagaccc	tgaggtcaag	ttcaactggt	acgtggacgg	cgtggaggtg	5520
cataatgcca	agacaaagcc	gcgggaggag	cagtacaaca	gcacgtaccg	tgtggtcagc	5580
gtcctcaccg	tcctgcacca	ggactggctg	aatggcaagg	agtacaagtg	caaggtctcc	5640
aacaaagccc	tcccagcccc	catcgagaaa	accatctcca	aagccaaagg	tgggaccctg	5700
ggggtgagag	ggccacatgg	acagaggccg	gctcggccca	ccctctgccc	tgagagtgc	5760
cgctgtacca	acctctgtcc	ctacagggca	gccccgagaa	ccacaggtgt	acaccctgcc	5820

cccatcccgg	gatgagctga	ccaagaacca	ggtcagcctg	acctgcctgg	tcaaaggctt	5880
ctatcccagc	gacatcgccg	tggagtggga	gagcaatggg	cagccggaga	acaactacaa	5940
gaccacgcct	cccgtgctgg	actccgacgg	ctccttcttc	ctctacagca	agctcaccgt	6000
ggacaagagc	aggtggcagc	aggggaacgt	cttctcatgc	tccgtgatgc	atgaggctct	6060
gcacaaccac	tacacgcaga	agagcctctc	cctgtctccg	ggtaaataag	tgcgacggcc	6120
ggcaagcccc	cgctccccgg	gctctcgccg	tcgcacgagg	atgcttggca	cgtaccccct	6180
gtacatactt	cccgggcgcc	cagcatggaa	ataaagcacc	cagcgctgcc	ctggggcccct	6240
gcgagactgt	gatggttctt	tccacgggtc	aggccgagtc	tgaggcctga	gtggcatgag	6300
atctgatatc	atcgatgaat	tcgagctcgg	taccggggga	tcgatccaga	catgataaga	6360
tacattgatg	agtttggaca	aaccacaact	agaatgcagt	gaaaaaatg	ctttatttgt	6420
gaaatttgtg	atgctattgc	tttatttgta	accattataa	gctgcaataa	acaagttaac	6480
aacaacaatt	gcattcattt	tatgtttcag	gttcaggggg	aggtgtggga	ggttttttta	6540
agcaagtaaa	acctctacaa	atgtggtatg	gctgattatg	atctctagtc	aaggcactat	6600
acatcaaata	ttccttatta	acccttttac	aaattaaaaa	gctaaaggta	cacaattttt	6660
gagcatagtt	attaatagca	gacactctat	gcctgtgtgg	agtaagaaaa	aacagtatgt	6720
tatgattata	actgttatgc	ctacttataa	aggttacaga	atatttttcc	ataattttct	6780
tgtatagcag	tgcagctttt	tcctttgtgg	tgtaaatagc	aaagcaagca	agagttctat	6840
tactaaacac	agcatgactc	aaaaaactta	gcaattctga	aggaaagtcc	ttgggggtctt	6900
ctacctttct	cttctttttt	ggaggagtag	aatgttgaga	gtcagcagta	gcctcatcat	6960
cactagatgg	catttcttct	gagcaaaaca	ggttttcctc	attaaaggca	ttccaccact	7020
gctcccattc	atcagttcca	taggttggaa	tctaaaatac	acaacaatt	agaatcagta	7080
gtttaacaca	ttatacactt	aaaaatttta	tattttacctt	agagctttta	atctctgtag	7140
gtagtttgtc	caattatgtc	acaccacaga	agtaagggtc	cttcacaaag	atccgggacc	7200
aaagcggcca	tcgtgcctcc	ccactcctgc	agttcggggg	catggatgcg	cggatagccg	7260
ctgctggttt	cctggatgcc	gacggatttg	cactgccggg	agaactccgc	gaggtcgtcc	7320
agcctcaggc	agcagctgaa	ccaactcgcg	aggggatcga	gcccgggggtg	ggcgaagaac	7380
tccagcatga	gatccccgcg	ctggaggatc	atccagccgg	cgtcccggaa	aacgattccg	7440
aagcccaacc	tttcatagaa	ggcggcggtg	gaatcgaaat	ctcgtgatgg	caggttgggc	7500
gtcgcttggt	cggtcatttc	gaaccccaga	gtcccgtctc	gaagaactcg	tcaagaaggc	7560
gatagaaggc	gatgcgctgc	gaatcgggag	cggcgatacc	gtaaagcacg	aggaagcggg	7620
cagcccattc	gccgccaagc	tcttcagcaa	tatcacgggt	agccaacgct	atgtcctgat	7680
agcgggtccgc	cacaccagc	cggccacagt	cgatgaatcc	agaaaagcgg	ccattttcca	7740

5509797.txt

```
ccatgatatt cggcaagcag gcatcgccat gggtcacgac gagatcctcg ccgtcgggca 7800
tgcgcgcctt gagcctggcg aacagttcgg ctggcgcgag cccctgatgc tcttcgtcca 7860
gatcatcctg atcgacaaga ccggcttcca tccgagtacg tgctcgctcg atgcgatgtt 7920
tcgcttggtg gtcgaatggg caggtagccg gatcaagcgt atgcagccgc cgcattgcat 7980
cagccatgat ggatactttc tcggcaggag caagggtgaga tgacaggaga tcctgccccg 8040
gcacttcgcc caatagcagc cagtcccttc ccgcttcagt gacaacgtcg agcacagctg 8100
cgcaaggaac gcccgtcgtg gccagccacg atagccgcgc tgcctcgtcc tgcagttcat 8160
tcagggcacc ggacaggtcg gtcttgacaa aaagaaccgg gcgcccctgc gctgacagcc 8220
ggaacacggc ggcattcagag cagccgattg tctgtttgtgc ccagtcatag ccgaatagcc 8280
tctccacca agcggccgga gaacctgcgt gcaatccatc ttgttcaatc atgcgaaacg 8340
atcctcatcc tgtctcttga tcagatcttg atcccctgcg ccatcagatc cttggcggca 8400
agaaagccat ccagtttact ttgcagggtc tcccaacctt accagagggc gcccagctg 8460
gcaattccgg ttcgcttgct gtccataaaa ccgcccagtc tagctatcgc catgtaagcc 8520
cactgcaagc tacctgcttt ctctttgcgc ttgcgttttc cttgttccag atagcccagt 8580
agctgacatt catccggggg cagcaccgtt tctgcggact ggctttctac gtgttccgct 8640
tccttttagca gcccttgccg cctgagtgct tgcggcagcg tgaagct 8687
```

<210> 17

<211> 9400

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence of the expression vector HCMV-K HuAb-VL1 hum
v1
(Complete DNA sequence of a humanised light chain expression vect
or comprising SEQ ID NO: 14 (humV1=VLh) from 3964-4284

<400> 17

```
ctagcttttt gcaaaagcct aggcctccaa aaaagcctcc tcactacttc tggaatagct 60
cagaggccga ggcggcctcg gcctctgcat aaataaaaaa aattagtcag ccatggggcg 120
gagaatgggc ggaactgggc ggagttaggg gcgggatggg cgaggttagg ggcgggacta 180
tggttgctga ctaattgaga tgcattgctt gcatacttct gcctgctggg gagcctgggt 240
```


5509797.txt

gctgactaat	tgagatgcat	gctttgcata	cttctgcctg	ctggggagcc	tggggacttt	300
ccacacccta	actgacacac	attccacagc	tgcctcgcgc	gtttcggtga	tgacggtgaa	360
aacctctgac	acatgcagct	cccggagacg	gtcacagctt	gtctgtaagc	ggatgccggg	420
agcagacaag	cccgtcaggg	cgcgtcagcg	ggtgttggcg	ggtgtcgggg	cgcagccatg	480
accagtcac	gtagcgatag	cggagtgtat	actggcttaa	ctatgcggca	tcagagcaga	540
ttgtactgag	agtgacccat	atgcggtgtg	aaataccgca	cagatgcgta	aggagaaaat	600
accgcatcag	gcgctcttcc	gcttcctcgc	tcactgactc	gctgcgctcg	gtcgttcggc	660
tgcggcgagc	ggtatcagct	cactcaaagg	cggtaatacg	gttatccaca	gaatcagggg	720
ataacgcagg	aaagaacatg	tgagcaaaaag	gccagcaaaa	ggccaggaac	cgtaaaaagg	780
ccgcgttgct	ggcgtttttc	cataggctcc	gccccctga	cgagcatcac	aaaaatcgac	840
gctcaagtca	gaggtggcga	aacccgacag	gactataaag	ataccaggcg	tttccccctg	900
gaagctccct	cgtgcgctct	cctgttccga	ccctgccgct	taccggatac	ctgtccgcct	960
ttctcccttc	gggaagcgtg	gcgctttctc	atagctcacg	ctgtaggtat	ctcagttcgg	1020
tgtaggtcgt	tcgctccaag	ctgggctgtg	tgcacgaacc	ccccgttcag	cccgaaccgct	1080
gcgccttata	cggtaactat	cgtcttgagt	ccaacccggt	aagacacgac	ttatcgccac	1140
tggcagcagc	cactggtaac	aggattagca	gagcgaggta	tgtaggcggt	gctacagagt	1200
tcttgaagtg	gtggcctaac	tacggctaca	ctagaaggac	agtatttggt	atctgcgctc	1260
tgctgaagcc	agttaccttc	ggaaaaagag	ttggtagctc	ttgatccggc	aaacaaacca	1320
ccgctggtag	cggtggtttt	tttgtttgca	agcagcagat	tacgcgcaga	aaaaaaggat	1380
ctcaagaaga	tcctttgatc	ttttctacgg	ggtctgacgc	tcagtggaac	gaaaactcac	1440
gttaagggat	tttggtcatg	agattatcaa	aaaggatctt	cacctagatc	cttttaaatt	1500
aaaaatgaag	ttttaaatca	atctaaagta	tatatgagta	aacttggtct	gacagttacc	1560
aatgcttaat	cagtgaggca	cctatctcag	cgatctgtct	atttcgttca	tccatagttg	1620
cctgactccc	cgtcgtgtag	ataactacga	tacgggaggg	cttaccatct	ggccccagtg	1680
ctgcaatgat	accgcgagac	ccacgctcac	cggctccaga	tttatcagca	ataaaccagc	1740
cagccggaag	ggccgagcgc	agaagtggtc	ctgcaacttt	atccgcctcc	atccagtcta	1800
ttaattgttg	ccgggaagct	agagtaagta	gttcgccagt	taatagtttg	cgcaacgttg	1860
ttgccattgc	tgcaggcatc	gtggtgtcac	gctcgtcgtt	tggtatggct	tcattcagct	1920
ccggttccca	acgatcaagg	cgagttacat	gatcccccat	gttggtgcaaa	aaagcggtta	1980
gctccttcgg	tcctccgatc	gttgtcagaa	gtaagttggc	cgcagtgtta	tcactcatgg	2040
ttatggcagc	actgcataat	tctcttactg	tcatgccatc	cgtaagatgc	ttttctgtga	2100

ctggtgagta	ctcaaccaag	tcattctgag	aatagtgtat	gcggcgaccg	agttgctctt	2160
gcccggcgtc	aacacgggat	aataccgcgc	cacatagcag	aactttaaaa	gtgctcatca	2220
ttggaaaacg	ttcttcgggg	cgaaaactct	caaggatctt	accgctgttg	agatccagtt	2280
cgatgtaacc	cactcgtgca	cccaactgat	cttcagcatc	ttttactttc	accagcgttt	2340
ctgggtgagc	aaaaacagga	aggcaaaatg	ccgcaaaaaa	gggaataagg	gcgacacgga	2400
aatgttgaat	actcatactc	ttcctttttc	aatattattg	aagcatttat	caggggttatt	2460
gtctcatgag	cggatacata	tttgaatgta	tttagaaaaa	taaacaaata	ggggttccgc	2520
gcacatttcc	ccgaaaagtg	ccacctgacg	tctaagaaac	cattattatc	atgacattaa	2580
cctataaaaa	taggcgtatc	acgaggccct	ttcgtcttca	agaattcagc	ttggctgcag	2640
tgaataataa	aatgtgtgtt	tgtccgaaat	acgcgttttg	agatttctgt	cgccgactaa	2700
attcatgtcg	cgcgatagtg	gtgtttatcg	ccgatagaga	tggcgatatt	ggaaaaatcg	2760
atatttgaaa	atatggcata	ttgaaaatgt	cgccgatgtg	agtttctgtg	taactgatat	2820
cgccattttt	ccaaaagtga	tttttgggca	tacgcgatat	ctggcgatag	cgcttatatc	2880
gtttacgggg	gatggcgata	gacgactttg	gtgacttggg	cgattctgtg	tgtcgcaaata	2940
atcgcagttt	cgatataggt	gacagacgat	atgaggctat	atcgccgata	gaggcgacat	3000
caagctggca	catggccaat	gcatatcgat	ctatacattg	aatcaatatt	ggccattagc	3060
catattattc	attggttata	tagcataaat	caatattggc	tattggccat	tgcatacgtt	3120
gtatccatat	cataatatgt	acattttatat	tggctcatgt	ccaacattac	cgccatgttg	3180
acattgatta	ttgactagtt	attaatagta	atcaattacg	gggtcattag	ttcatagccc	3240
atatatggag	ttccgcgtta	cataacttac	ggtaaattggc	ccgcctggct	gaccgcccaa	3300
cgacccccgc	ccattgacgt	caataatgac	gtatgttccc	atagtaacgc	caatagggac	3360
tttccattga	cgtcaatggg	tggagtatct	acggtaaact	gcccaacttg	cagtacatca	3420
agtgtatcat	atgccaaagta	cgccccctat	tgacgtcaat	gacggtaaata	ggcccgccctg	3480
gcattatgcc	cagtacatga	ccttatggga	ctttcctact	tggcagtaca	tctacgtatt	3540
agtcacgcgt	attaccatgg	tgatgcgggt	ttggcagtag	atcaatgggc	gtggatagcg	3600
gtttgactca	cggggatttc	caagtctcca	ccccattgac	gtcaatggga	gtttgttttg	3660
gcaccaaaat	caacgggact	ttccaaaatg	tcgtaacaac	tccgccccat	tgacgcaaata	3720
gggcggtagg	cgtgtacggt	gggaggtcta	tataagcaga	gctcgtttag	tgaaccgtca	3780
gatcgcctgg	agacgccatc	cacgctgttt	tgacctccat	agaagacacc	gggaccgatc	3840
cagcctccgc	aagcttgata	tcgaattcct	gcagcccggg	ggatccgccc	gcttgccgcc	3900
accatggaga	cccccgccca	gctgctgttc	ctgctgctgc	tgtggctgcc	cgacaccacc	3960
ggcgacattc	tgctgacca	gtctccagcc	accctgtctc	tgagtccagg	agaaagagcc	4020

5509797.txt

actctctcct	gcagggccag	tcagaacatt	ggcacaagca	tacagtggta	tcaacaaaaa	4080
ccaggtcagg	ctccaaggct	tctcataagg	tcttcttctg	agtctatctc	tgggatccct	4140
tccaggttta	gtggcagtgg	atcagggaca	gattttactc	ttaccatcag	cagtctggag	4200
cctgaagatt	ttgcagtgtg	ttactgtcaa	caaagtaata	cctggccatt	cacgttcggc	4260
caggggacca	agctggagat	caaacgtgag	tattctagaa	agatcctaga	attctaaact	4320
ctgagggggg	cggatgacgt	ggccatttct	tgcctaaagc	attgagttta	ctgcaagggtc	4380
agaaaagcat	gcaaagccct	cagaatggct	gcaaagagct	ccaacaaaac	aatttagaac	4440
tttattaagg	aataggggga	agctaggaag	aaactcaaaa	catcaagatt	ttaaatacgc	4500
ttcttggtct	ccttgctata	attatctggg	ataagcatgc	tgttttctgt	ctgtccctaa	4560
catgccctgt	gattatccgc	aaacaacaca	ccaaggggca	gaactttggt	acttaaacac	4620
catcctgttt	gcttctttcc	tcaggaactg	tggctgcacc	atctgtcttc	atcttcccgc	4680
catctgatga	gcagttgaaa	tctggaactg	cctctgttgt	gtgcctgctg	aataacttct	4740
atcccagaga	ggccaaagta	cagtggaagg	tggataacgc	cctccaatcg	ggtaactccc	4800
aggagagtgt	cacagagcag	gacagcaagg	acagcaccta	cagcctcagc	agcacctga	4860
cgctgagcaa	agcagactac	gagaaacaca	aagtctacgc	ctgcgaagtc	acccatcagg	4920
gcctgagctc	gcccgtcaca	aagagcttca	acaggggaga	gtgttagagg	gagaagtgcc	4980
cccacctgct	cctcagttcc	agcctgaccc	cctcccatcc	tttggcctct	gacccttttt	5040
ccacagggga	cctaccccta	ttgcggtcct	ccagctcatc	tttcacctca	ccccctcct	5100
cctccttggc	tttaattatg	ctaagtgttg	aggagaatga	ataaataaag	tgaatctttg	5160
cacctgtggt	ttctctcttt	cctcatttaa	taattattat	ctgttgttta	ccaactactc	5220
aatttctctt	ataagggact	aaatatgtag	tcatcctaag	gcgcataacc	atttataaaa	5280
atcatccttc	attctatttt	accctatcat	cctctgcaag	acagtcctcc	ctcaaaccga	5340
caagccttct	gtcctcacag	tcccctgggc	catggtagga	gagacttgct	tccttgtttt	5400
cccctcctca	gcaagccctc	atagtccttt	ttaaggggtga	caggtcttac	agtcatatat	5460
cctttgattc	aattccctga	gaatcaacca	aagcaaattt	ttcaaaagaa	gaaacctgct	5520
ataaagagaa	tcattcattg	caacatgata	taaaataaca	acacaataaa	agcaattaaa	5580
taaacaaaca	ataggggaaat	gtttaagtgc	atcatgggtac	ttagacttaa	tggaatgtca	5640
tgccttattt	acatttttta	acaggtactg	agggactcct	gtctgccaag	ggccgtattg	5700
agtactttcc	acaaccta	ttaatccaca	ctatactgtg	agattaaaaa	cattcattaa	5760
aatgttgcaa	aggttctata	aagctgagag	acaaatatat	tctataactc	agcaatccca	5820
cttctagatg	actgagtgtc	cccaccacc	aaaaaactat	gcaagaatgt	tcaaagcagc	5880

tttatattaca	aaagccaaaa	attggaaata	gcccgattgt	ccaacaatag	aatgagttat	5940
taaactgtgg	tatgtttata	cattagaata	cccaatgagg	agaattaaca	agctacaact	6000
atacctactc	acacagatga	atctcataaa	aataatgtta	cataagagaa	actcaatgca	6060
aaagatatgt	tctgtatgtt	ttcatccata	taaagttcaa	aaccaggtaa	aaataaagtt	6120
agaaatttgg	atggaaatta	ctcttagctg	gggggtggcg	agtttagtgcc	tgggagaaga	6180
caagaagggg	cttctggggg	cttggtaatg	ttctgttcct	cgtgtggggg	tgtgcagtta	6240
tgatctgtgc	actgttctgt	atacacatta	tgcttcaaaa	taacttcaca	taaagaacat	6300
cttataccca	gttaatagat	agaagaggaa	taagtaatag	gtcaagacca	cgcagctggt	6360
aagtgggggg	gcctgggatc	aaatagctac	ctgcctaatc	ctgccctctt	gagccctgaa	6420
tgagtctgcc	ttccagggct	caaggtgctc	aacaaaacaa	caggcctgct	attttcctgg	6480
catctgtgcc	ctgtttggct	agctaggagc	acacatacat	agaaattaaa	tgaaacagac	6540
cttcagcaag	gggacagagg	acagaattaa	ccttgcccag	acactggaaa	cccatgtatg	6600
aacactcaca	tgttttggga	gggggaaggg	cacatgtaaa	tgaggactct	tcctcattct	6660
atggggcact	ctggccctgc	ccctctcagc	tactcatcca	tccaacacac	ctttctaagt	6720
acctctctct	gcctacactc	tgaagggggt	caggagtaac	taacacagca	tcccttccct	6780
caaatgactg	acaatccctt	tgtcctgctt	tgtttttctt	tccagtcagt	actgggaaag	6840
tggggaagga	cagtcatgga	gaaactacat	aaggaagcac	cttgcccttc	tgcctcttga	6900
gaatgttgat	gagtatcaaa	tctttcaaac	tttggagggt	tgagtagggg	tgagactcag	6960
taatgtccct	tccaatgaca	tgaacttgct	cactcatccc	tggggggcaa	attgaacaat	7020
caaaggcagg	cataatccag	ctatgaattc	taggatcgat	ccagacatga	taagatacat	7080
tgatgagttt	ggacaaacca	caactagaat	gcagtgaaaa	aaatgcttta	tttgtgaaat	7140
ttgtgatgct	attgctttat	ttgtaaccat	tataagctgc	aataaacaag	ttaacaacaa	7200
caattgcatt	cattttatgt	ttcaggttca	gggggagggt	tgggagggtt	tttaaagcaa	7260
gtaaaacctc	tacaaatgtg	gtatggctga	ttatgatctc	tagtcaaggc	actatacatc	7320
aaatattcct	tattaacccc	tttacaattt	aaaaagctaa	aggtacacaa	tttttgagca	7380
tagttattaa	tagcagacac	tctatgcctg	tgtggagtaa	gaaaaaacag	tatgttatga	7440
ttataactgt	tatgcctact	tataaagggt	acagaatatt	tttccataat	tttcttgtat	7500
agcagtgcag	ctttttcctt	tgtggtgtaa	atagcaaagc	aagcaagagt	tctattacta	7560
aacacagcat	gactcaaaaa	acttagcaat	tctgaaggaa	agtccttggg	gtcttctacc	7620
tttctcttct	tttttggagg	agtagaatgt	tgagagtcag	cagtagcctc	atcatcacta	7680
gatggcattt	cttctgagca	aaacagggtt	tcctcattaa	aggcattcca	ccactgctcc	7740
cattcatcag	ttccatagggt	tggaatctaa	aatacacaaa	caattagaat	cagtagttta	7800

5509797.txt

```

acacattata cacttaaaaa ttttatatatt accttagagc tttaaattctc tgtaggtagt 7860
ttgtccaatt atgtcacacc acagaagtaa ggttccttca caaagatccg ggaccaaagc 7920
ggccatcgtg cctccccact cctgcagttc gggggcatgg atgcgcggat agccgctgct 7980
ggtttcctgg atgccgacgg atttgcactg ccggtagaac tccgcgaggt cgtccagcct 8040
caggcagcag ctgaaccaac tcgcgagggg atcgagcccg ggggtgggcga agaactccag 8100
catgagatcc ccgcgctgga ggatcatcca gccggcgtcc cggaaaacga ttccgaagcc 8160
caacctttca tagaaggcgg cggtggaatc gaaatctcgt gatggcaggt tgggcgtcgc 8220
ttggtcggtc atttcgaacc ccagagtccc gctcagaaga actcgtcaag aaggcgatag 8280
aaggcgatgc gctgcgaatc gggagcggcg ataccgtaaa gcacgaggaa gcggtcagcc 8340
cattcgccgc caagctcttc agcaatatca cgggtagcca acgctatgtc ctgatagcgg 8400
tccgccacac ccagccggcc acagtcgatg aatccagaaa agcggccatt ttccaccatg 8460
atattcggca agcaggcatc gccatgggtc acgacgagat cctcgccgtc gggcatgcgc 8520
gccttgagcc tggcgaacag ttcggctggc gcgagcccct gatgctcttc gtccagatca 8580
tcctgatcga caagaccggc ttccatccga gtacgtgctc gctcgatgcg atgtttcgct 8640
tggtggtcga atgggcaggt agccggatca agcgtatgca gccgccgat tgcattcagcc 8700
atgatggata ctttctcggc aggagcaagg tgagatgaca ggagatcctg ccccggcact 8760
tcgccaata gcagccagtc ctttcccgtc tcagtgacaa cgtcgagcac agctgcgcaa 8820
ggaacgcccg tcgtggccag ccacgatagc cgcgctgcct cgtcctgcag ttcattcagg 8880
gcaccggaca ggtcggctctt gacaaaaaga accgggcgcc cctgcgctga cagccggaac 8940
acggcggcat cagagcagcc gattgtctgt tgtgcccagt catagccgaa tagcctctcc 9000
acccaagcgg ccggagaacc tgcgtgcaat ccatcttggt caatcatgcg aaacgatcct 9060
catcctgtct cttgatcaga tcttgatccc ctgcgccatc agatccttgg cggcaagaaa 9120
gccatccagt ttactttgca gggcttccca accttaccag agggcgcccc agctggcaat 9180
tccggttcgc ttgctgtcca taaaaccgcc cagtctagct atcgccatgt aagcccactg 9240
caagctacct gctttctctt tgcgcttgcg ttttcccttg tccagatagc ccagtagctg 9300
acattcatcc ggggtcagca ccgtttctgc ggactggctt tctacgtggt ccgcttcctt 9360
tagcagccct tgcgccctga gtgcttgcg cagcgtgaag 9400

```

<210> 18

<211> 9362

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> Nucleotide sequence of the expression vector HCMV-K HuAb-VL1 hum
V2
(Complete DNA Sequence of a humanised light chain expression vect
or comprising SEQ ID NO: 13 (humV2=VLM) from 3926-4246)

<400> 18

ctagcttttt	gcaaaagcct	aggcctccaa	aaaagcctcc	tcactacttc	tggaatagct	60
cagaggccga	ggcggcctcg	gcctctgcat	aaataaaaaa	aattagtcag	ccatggggcg	120
gagaatgggc	ggaactgggc	ggagttaggg	gcgggatggg	cggagttagg	ggcgggacta	180
tggttgctga	ctaattgaga	tgcatgcttt	gcatacttct	gcctgctggg	gagcctggtt	240
gctgactaat	tgagatgcat	gctttgcata	cttctgcctg	ctggggagcc	tggggacttt	300
ccacacccta	actgacacac	attccacagc	tgccctcgcg	gtttcggtga	tgacggtgaa	360
aacctctgac	acatgcagct	cccggagacg	gtcacagctt	gtctgtaagc	ggatgccggg	420
agcagacaag	cccgtcaggg	cgcgtcagcg	ggtgttggcg	ggtgtcgggg	cgcagccatg	480
accagtcac	gtagcgatag	cggagtgtat	actggcttaa	ctatgcggca	tcagagcaga	540
ttgtactgag	agtgcaccat	atgcggtgtg	aaataccgca	cagatgcgta	aggagaaaat	600
accgcatcag	gcgctcttcc	gcttcctcgc	tcactgactc	gctgcgctcg	gtcgttcggc	660
tgcggcgagc	ggtatcagct	cactcaaagg	cggtaatacg	gttatccaca	gaatcagggg	720
ataacgcagg	aaagaacatg	tgagcaaaaag	gccagcaaaa	ggccaggaac	cgtaaaaagg	780
ccgcgttgct	ggcgtttttc	cataggctcc	gccccctga	cgagcatcac	aaaaatcgac	840
gctcaagtca	gaggtggcga	aacccgacag	gactataaag	ataccaggcg	tttccccctg	900
gaagctccct	cgtgcgctct	cctgttccga	ccctgccgct	taccggatac	ctgtccgcct	960
ttctcccttc	gggaagcgtg	gcgctttctc	atagctcacg	ctgtaggtat	ctcagttcgg	1020
tgtaggtcgt	tcgctccaag	ctgggctgtg	tgcacgaacc	ccccgttcag	cccgaccgct	1080
gcgccttatc	cggtaactat	cgtcttgagt	ccaacccggt	aagacacgac	ttatcgccac	1140
tggcagcagc	cactggtaac	aggattagca	gagcgaggta	tgtaggcggt	gctacagagt	1200
tcttgaagtg	gtggcctaac	tacggctaca	ctagaaggac	agtatttggt	atctgcgctc	1260
tgctgaagcc	agttaccttc	ggaaaaagag	ttggtagctc	ttgatccggc	aaacaaacca	1320
ccgctggtag	cggtgggtttt	tttgtttgca	agcagcagat	tacgcgcaga	aaaaaaggat	1380
ctcaagaaga	tcctttgatc	ttttctacgg	ggtctgacgc	tcagtggaac	gaaaactcac	1440

5509797.txt

gttaagggat	tttggtcatg	agattatcaa	aaaggatctt	cacctagatc	cttttaaatt	1500
aaaaatgaag	ttttaaatca	atctaaagta	tatatgagta	aacttgggtct	gacagttacc	1560
aatgcttaat	cagtgaggca	cctatctcag	cgatctgtct	atttcgttca	tccatagtgtg	1620
cctgactccc	cgtcgtgtag	ataactacga	tacgggaggg	cttaccatct	ggccccagtg	1680
ctgcaatgat	accgcgagac	ccacgctcac	cggctccaga	tttatcagca	ataaaccagc	1740
cagccggaag	ggccgagcgc	agaagtggtc	ctgcaacttt	atccgcctcc	atccagtcta	1800
ttaattgttg	ccgggaagct	agagtaagta	gttcgccagt	taatagtttg	cgcaacgttg	1860
ttgccattgc	tgcaggcatc	gtggtgtcac	gctcgtcgtt	tggtatggct	tcattcagct	1920
ccggttccca	acgatcaagg	cgagttacat	gatcccccat	gttgtgcaaa	aaagcggtta	1980
gctccttcgg	tcctccgata	gttgtcagaa	gtaagttagc	cgagtggtta	tcactcatgg	2040
ttatggcagc	actgcataat	tctcttactg	tcatgccatc	cgtaagatgc	ttttctgtga	2100
ctggtgagta	ctcaaccaag	tcattctgag	aatagtgtat	gcggcgaccg	agttgctctt	2160
gcccggcgtc	aacacgggat	aataccgcgc	cacatagcag	aactttaaaa	gtgctcatca	2220
ttggaaaacg	ttcttcgggg	cgaaaactct	caaggatctt	accgctgttg	agatccagtt	2280
cgatgtaacc	cactcgtgca	cccaactgat	cttcagcatc	ttttactttc	accagcgttt	2340
ctgggtgagc	aaaaacagga	aggcaaaatg	ccgcaaaaaa	gggaataagg	gcgacacgga	2400
aatgttgaat	actcatactc	ttcctttttc	aatattattg	aagcatttat	cagggttatt	2460
gtctcatgag	cggatacata	tttgaatgta	tttagaaaaa	taaacaaata	ggggttccgc	2520
gcacatttcc	ccgaaaagtg	ccacctgacg	tctaagaaac	cattattatc	atgacattaa	2580
cctataaaaa	taggcgtatc	acgaggccct	ttcgtcttca	agaattcagc	ttggctgcag	2640
tgaataataa	aatgtgtgtt	tgtccgaaat	acgcgttttg	agatttctgt	cgccgactaa	2700
attcatgtcg	cgcgatagtg	gtgtttatcg	ccgatagaga	tggcgatatt	ggaaaaatcg	2760
atatttgaaa	atatggcata	ttgaaaatgt	cgccgatgtg	agtttctgtg	taactgatat	2820
cgccattttt	ccaaaagtg	tttttgggca	tacgcgatat	ctggcgatag	cgcttatatc	2880
gtttacgggg	gatggcgata	gacgactttg	gtgacttggg	cgattctgtg	tgtcgcaaat	2940
atcgcagttt	cgatataggt	gacagacgat	atgaggctat	atcgccgata	gaggcgacat	3000
caagctggca	catggccaat	gcatatcgat	ctatacattg	aatcaatatt	ggccattagc	3060
catattattc	attggttata	tagcataaat	caatattggc	tattggccat	tgcatacggt	3120
gtatccatat	cataatatgt	acatttatat	tggctcatgt	ccaacattac	cgccatgttg	3180
acattgatta	ttgactagtt	attaatagta	atcaattacg	gggtcattag	ttcatagccc	3240
atatatggag	ttccgcgtta	cataacttac	ggtaaattggc	ccgcctggct	gaccgcccaa	3300
cgacccccgc	ccattgacgt	caataatgac	gtatgttccc	atagtaacgc	caatagggac	3360

5509797.txt

tttccattga	cgtcaatggg	tggagtat	ttt acggtaa	act gccact	tgg cagtaca	tca 3420
agtgtatcat	atgccaagta	cgccccctat	tgacgtcaat	gacggtaa	at ggccgcctg	3480
gcattatgcc	cagtacatga	ccttatggga	ctttcctact	tggcagtaca	tctacgtatt	3540
agtcacgcct	attaccatgg	tgatgcggtt	ttggcagtac	atcaatgggc	gtggatagcg	3600
gtttgactca	cggggatttc	caagtctcca	ccccattgac	gtcaatggga	gtttgttttg	3660
gcaccaaaat	caacgggact	ttccaaaatg	tcgtaacaac	tccgccccat	tgacgcaa	at 3720
gggcggtagg	cgtgtacggt	gggaggtcta	tataagcaga	gctcgtttag	tgaaccgtca	3780
gatcgcctgg	agacgccatc	cacgctgttt	tgacctccat	agaagacacc	gggaccgatc	3840
cagcctccgc	aagcttgccg	ccaccatgga	gacccccgcc	cagctgctgt	tcctgctgct	3900
gctgtggctg	cccgaaccca	ccggcgacat	tctgctgacc	cagtctccag	ccaccctgtc	3960
tctgagtcca	ggagaaagag	ccactttctc	ctgcagggcc	agtcagaaca	ttggcacaag	4020
catacagtgg	tatcaacaaa	aaacaaatgg	tgctccaagg	cttctcataa	ggctcttctc	4080
tgagtctatc	tctgggatcc	cttccagggt	tagtggcagt	ggatcaggga	cagattttac	4140
tcttaccatc	agcagtctgg	agcctgaaga	ttttgcagtg	tattactgtc	aacaaagtaa	4200
tacctggcca	ttcacgttcg	gccaggggac	caagctggag	atcaaacgtg	agtattctag	4260
aaagatccta	gaattctaaa	ctctgagggg	gtcggatgac	gtggccattc	tttgcctaaa	4320
gcattgagtt	tactgcaagg	tcagaaaagc	atgcaaagcc	ctcagaatgg	ctgcaaagag	4380
ctccaacaaa	acaatttaga	actttattaa	ggaatagggg	gaagctagga	agaaactcaa	4440
aacatcaaga	ttttaataac	gcttcttggt	ctccttgcta	taattatctg	ggataagcat	4500
gctgttttct	gtctgtccct	aacatgccct	gtgattatcc	gcaaacaaca	caccaagggg	4560
cagaactttg	ttacttaaac	accatcctgt	ttgcttcttt	cctcaggaac	tgtggctgca	4620
ccatctgtct	tcatcttccc	gccatctgat	gagcagttga	aatctggaac	tgcctctgtt	4680
gtgtgcctgc	tgaataactt	ctatcccaga	gaggccaaag	tacagtggaa	ggtggataac	4740
gccctccaat	cgggtaactc	ccaggagagt	gtcacagagc	aggacagcaa	ggacagcacc	4800
tacagcctca	gcagcacctt	gacgctgagc	aaagcagact	acgagaaaca	caaagtctac	4860
gcctgcgaag	tcacccatca	gggcctgagc	tcgcccgtca	caaagagctt	caacagggga	4920
gagtgttaga	gggagaagtg	ccccacctg	ctcctcagtt	ccagcctgac	cccctcccat	4980
cctttggcct	ctgacccttt	ttccacaggg	gacctacccc	tattgcgggtc	ctccagctca	5040
tctttcacct	cacccccctc	ctcctccttg	gctttaatta	tgctaattgt	ggaggagaa	at 5100
gaataaataa	agtgaatctt	tgcacctgtg	gtttctctct	ttcctcattt	aataattatt	5160
atctgttggt	taccaactac	tcaatttctc	ttataaggga	ctaaatatgt	agtcaccta	5220

5509797.txt

aggcgcataa	ccatttataa	aaatcatcct	tcatttctatt	ttaccctatc	atcctctgca	5280
agacagtcct	ccctcaaacc	cacaagcctt	ctgtcctcac	agtcccctgg	gccatggtag	5340
gagagacttg	cttccttggt	ttcccctcct	cagcaagccc	tcatagtcct	ttttaagggg	5400
gacaggtcct	acagtcatat	atcctttgat	tcaattccct	gagaatcaac	caaagcaa	5460
ttttcaaaag	aagaaacctg	ctataaagag	aatcattcat	tgcaacatga	tataaaataa	5520
caacacaata	aaagcaatta	aataaacaaa	caatagggaa	atgtttaagt	tcatcatggg	5580
acttagactt	aatggaatgt	catgccttat	ttacattttt	aaacaggtac	tgagggactc	5640
ctgtctgcca	agggccgtat	tgagtacttt	ccacaacct	atttaatcca	cactatactg	5700
tgagattaaa	aacattcatt	aaaatgttgc	aaaggttcta	taaagctgag	agacaaatat	5760
attctataac	tcagcaatcc	cacttctaga	tgactgagtg	tccccacca	ccaaaaaact	5820
atgcaagaat	gttcaaagca	gctttattta	caaaagccaa	aaattggaaa	tagccccgatt	5880
gtccaacaat	agaatgagtt	attaaactgt	ggatatgttta	tacattagaa	tacccaatga	5940
ggagaattaa	caagctacaa	ctatacctac	tcacacagat	gaatctcata	aaaataatgt	6000
tacataagag	aaactcaatg	caaaagatat	gttctgtatg	ttttcatcca	tataaagttc	6060
aaaaccaggt	aaaaataaag	ttagaaattt	ggatggaaat	tactcttagc	tggggggtggg	6120
cgagttagtg	cctgggagaa	gacaagaagg	ggcttctggg	gtcttggtaa	tgttctgttc	6180
ctcgtgtggg	gttgtgcagt	tatgatctgt	gcactgttct	gtatacacat	tatgcttcaa	6240
aataacttca	cataaagaac	atcttatacc	cagttaatag	atagaagagg	aataagtaat	6300
aggtcaagac	cacgcagctg	gtaagtgggg	gggcctggga	tcaaatagct	acctgcctaa	6360
tcctgccctc	ttgagccctg	aatgagtcctg	ccttccaggg	ctcaagggtgc	tcaacaaaac	6420
aacaggcctg	ctatttttct	ggcatctgtg	ccctgttttg	ctagctagga	gcacacatac	6480
atagaaatta	aatgaaacag	accttcagca	aggggacaga	ggacagaatt	aaccttgccc	6540
agacactgga	aacccatgta	tgaacactca	catgtttggg	aagggggaag	ggcacatgta	6600
aatgaggact	cttcctcatt	ctatggggca	ctctggccct	gcccctctca	gctactcatc	6660
catccaacac	acctttctaa	gtacctctct	ctgcctacac	tctgaagggg	ttcaggagta	6720
actaacacag	catcccttcc	ctcaaatagac	tgacaatccc	tttgtcctgc	tttgtttttc	6780
tttccagtca	gtactgggaa	agtggggaag	gacagtcatg	gagaaactac	ataaggaagc	6840
accttgccct	tctgcctctt	gagaatgttg	atgagtatca	aatctttcaa	actttggagg	6900
tttgagtagg	ggtgagactc	agtaatgtcc	cttccaatga	catgaacttg	ctcactcatc	6960
cctggggggc	aaattgaaca	atcaaaggca	ggcataatcc	agctatgaat	tctaggatcg	7020
atccagacat	gataagatac	attgatgagt	ttggacaaac	cacaactaga	atgcagtgaa	7080
aaaaatgctt	tatttggtgaa	atttgatgatg	ctattgcttt	atttgtaacc	attataagct	7140

5509797.txt

gcaataaaca agttaacaac aacaattgca ttcattttat gtttcagggt cagggggagg	7200
tgtgggagggt tttttaagc aagtaaaacc tctacaaatg tggtatggct gattatgatc	7260
tctagtcaag gcactataca tcaaattatc cttattaacc cctttacaaa ttaaaaagct	7320
aaagggtacac aatttttgag catagttatt aatagcagac actctatgcc tgtgtggagt	7380
aagaaaaaac agtatgttat gattataact gttatgccta cttataaagg ttacagaata	7440
tttttccata attttcttgt atagcagtgc agctttttcc tttgtggtgt aaatagcaaa	7500
gcaagcaaga gttctattac taaacacagc atgactcaaa aaacttagca attctgaagg	7560
aaagtccttg gggcttctta cctttctctt cttttttgga ggagtagaat gttgagagtc	7620
agcagtagcc tcatcatcac tagatggcat ttcttctgag caaaacagggt tttcctcatt	7680
aaaggcattc caccactgct cccattcatc agttccatag gttggaatct aaaatacaca	7740
aacaattaga atcagtagtt taacacatta tacacttaaa aattttatat ttaccttaga	7800
gctttaaatc tctgtaggta gtttgtccaa ttatgtcaca ccacagaagt aaggttcctt	7860
cacaaagatc cgggaccaa gcggccatcg tgcctcccca ctctgcagt tcgggggcat	7920
ggatgcgcgg atagccgctg ctggtttcct ggatgccgac ggatttgcac tgccggtaga	7980
actccgcgag gtcgtccagc ctcaggcagc agctgaacca actcgcgagg ggatcgagcc	8040
cggggtgggc gaagaactcc agcatgagat cccgcgctg gaggatcatc cagccggcgt	8100
cccggaaaac gattccgaag cccaaccttt catagaaggc ggcggtggaa tcgaaatctc	8160
gtgatggcag gttgggcgtc gcttggtcgg tcatttcgaa cccagagtc ccgctcagaa	8220
gaactcgtca agaaggcgat agaaggcgat gcgctgcgaa tcgggagcgg cgataccgta	8280
aagcacgagg aagcggtcag cccattcgcc gccaaagctct tcagcaatat cacgggtagc	8340
caacgctatg tcctgatagc ggtccgccac acccagccgg ccacagtcga tgaatccaga	8400
aaagcggcca ttttccacca tgatattcgg caagcaggca tcgccatggg tcacgacgag	8460
atcctcgccg tcgggcatgc gcgccttgag cctggcgaac agttcggctg gcgagagccc	8520
ctgatgctct tcgtccagat catcctgatc gacaagaccg gcttccatcc gagtacgtgc	8580
tcgctcgatg cgatgtttcg cttggtggtc gaatgggcag gtagccggat caagcgtatg	8640
cagccgccgc attgcatcag ccatgatgga tactttctcg gcaggagcaa ggtgagatga	8700
caggagatcc tgccccggca cttcgcccaa tagcagccag tcccttcccg cttcagtgac	8760
aacgtcgagc acagctgcgc aaggaacgcc cgctcgtggcc agccacgata gccgcgctgc	8820
ctcgtcctgc agttcattca gggcaccgga caggtcggtc ttgacaaaaa gaaccgggcg	8880
cccctgcgct gacagccgga acacggcggc atcagagcag ccgattgtct gttgtgcca	8940
gtcatagccg aatagcctct ccaccaagc ggccggagaa cctgcgtgca atccatcttg	9000

5509797.txt

ttcaatcatg cgaaacgatc ctcatcctgt ctcttgatca gatcttgatc ccctgcgcca 9060
tcagatcctt ggcggcaaga aagccatcca gtttactttg cagggcttcc caaccttacc 9120
agagggcgcc ccagctggca attccggttc gcttgctgtc cataaaaccg cccagtctag 9180
ctatcgccat gtaagcccac tgcaagctac ctgctttctc tttgcgcttg cgttttccct 9240
tgtccagata gcccagtagc tgacattcat ccgggggtcag caccgtttct gcggactggc 9300
tttctacgtg ttccgcttcc tttagcagcc cttgcgccct gagtgcttgc ggcagcgtga 9360
ag 9362

<210> 19

<211> 11

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> hypervariable regions CDR1' in a CD45RO/RB binding molecule of SE
Q ID NO:1

<400> 19

Arg Ala Ser Gln Asn Ile Gly Thr Ser Ile Gln
1 5 10

<210> 20

<211> 7

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> hypervariable region CDR2' in a CD45RO/RB binding molecule of SEQ
ID NO:1

<400> 20

Ser Ser Ser Glu Ser Ile Ser
1 5

<210> 21

<211> 9

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> hypervariable region CDR3' in a CD45RO/RB binding molecule of SEQ
ID NO:1

<400> 21

Gln Gln Ser Asn Thr Trp Pro Phe Thr
1 5

<210> 22

<211> 5

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> hypervariable region CDR1 in a CD45RO/RB binding molecule of SEQ
ID NO:2

<400> 22

Asn Tyr Ile Ile His
1 5

<210> 23

<211> 17

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> hypervariable region CDR2 in a CD45RO/RB binding molecule of SEQ
ID NO:2

<400> 23

Tyr Phe Asn Pro Tyr Asn His Gly Thr Lys Tyr Asn Glu Lys Phe Lys
1 5 10 15

Gly

<210> 24

<211> 9

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<223> hypervariable region CDR3 in a CD45RO/RB binding molecule of SEQ
ID NO:2

<400> 24

Ser Gly Pro Tyr Ala Trp Phe Asp Thr
1 5

<210> 25

<211> 33

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> polynucleotide sequence encoding the amino acid sequence of CDR1

<400> 25

5509797.txt
ggccagtcag aacattggca caagcataca gtg 33

<210> 26

<211> 21

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> polynucleotide sequence encoding the amino acid sequence of CDR2

<400> 26
ttctttctgag tctatctctg g 21

<210> 27

<211> 27

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> polynucleotide sequence encoding the amino acid sequence of CDR3

<400> 27
acaaagtaat acctggccat tcacgtt 27

<210> 28

<211> 15

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> polynucleotide sequence encoding the amino acid sequence of CDR1'

<400> 28
ttatattatc cactg

15

<210> 29

<211> 51

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> polynucleotide sequence encoding the amino acid sequence of CDR2'

<400> 29
ttttaatcct tacaatcatg gtactaagta caatgagaag ttcaaaggca g

51

<210> 30

<211> 27

<212> DNA

<213> Artificial

<220>

<221> misc_feature

<223> polynucleotide sequence encoding the amino acid sequence of CDR3'

<400> 30
aggaccctat gcctggtttg acacctg

27